

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/5162	Serial No. 10/024,985
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Shang, et al.	
(Use several sheets if necessary)		Filing Date December 18, 2001	Group Unknown
Examiner Unknown			

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ame	A1	4,058,430	11/15/77	Suntola et al.	156	611	11/25/1975
	A2	4,389,973	06/28/83	Suntola et al.	118	725	12/11/1981
	A3	4,413,022	11/01/83	Suntola et al.	427	255.2	06/21/1979
	A4	4,486,487	12/04/84	Skarp	428	216	04/25/1983
	A5	4,767,494	08/30/88	Kobayashi et al.	156	606	09/19/1986
	A6	4,806,321	02/21/89	Nishizawa et al.	422	245	07/21/1985
	A7	4,829,022	05/09/89	Kobayashi et al.	437	107	12/09/1986
	A8	4,834,831	05/30/89	Nishizawa et al.	156	611	09/04/1987
	A9	4,838,983	06/13/89	Schumaker et al.	156	613	03/18/1988
	A10	4,838,993	06/13/89	Aoki et al.	156	643	12/03/1987
	A11	4,840,921	06/20/89	Matsumoto	437	89	06/30/1988
	A12	4,845,049	07/04/89	Sunakawa	437	81	03/28/1988
ame	A13	4,859,625	08/22/89	Nishizawa et al.	437	81	11/20/1987

For Ign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B1	01/66832 A2	09/13/2001	WO	C30B	16/44		X
	B2	01/40541 A1	06/07/2001	WO	C23C	16/40		X
	B3	01/36702 A1	05/25/2001	WO	C23C	16/00		X
	B4	01/29893 A1	04/26/2001	WO	H01L	21/768		X
	B5	01/29891 A1	04/26/2001	WO	H01L	21/768		X

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	Hultman, et al., "Review of the thermal and mechanical stability of TiN-based thin films", <i>Zeitschrift Fur Metallkunde</i> , 90(10) (Oct. 1999), pp. 803-813.
	C2	Klaus, et al., "Atomic Layer Deposition of SiO ₂ Using Catalyzed and Uncatalyzed Self-Limiting Surface Reactions", <i>Surface Review & Letters</i> , 6(3&4) (1999), pp. 435-448.

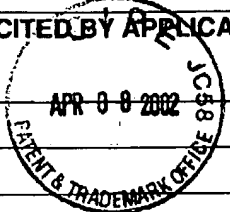
Examiner

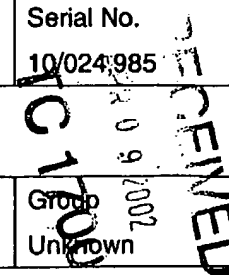
A. Michelle Howell

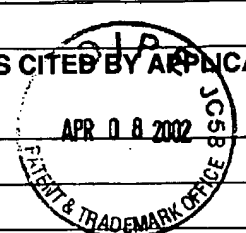
Date Considered

01-23-04

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U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)				Docket No. AMAT/5162		Serial No. 10024385	
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(Use several sheets if necessary)				Examiner Unknown		Group Unknown	
<div style="text-align: center;">  </div>							
U.S. Patent Documents							
*Examiner Initial	Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
AT	A14	4,859,627	Sunakawa	437	81	07/01/1988	
	A15	4,861,417	Mochizuki et al.	156	610	03/24/1988	
	A16	4,876,218	Pessa et al.	437	107	09/26/1988	
	A17	4,927,670	Erbil	427	255.3	06/22/1988	
	A18	4,931,132	Aspnes et al.	156	601	10/07/1988	
	A19	4,960,720	Shimbo	437	105	08/24/1987	
	A20	4,975,252	Nishizawa et al.	422	245	05/26/1989	
	A21	4,993,357	Scholz	118	715	12/21/1989	
	A22	5,013,683	Petroff et al.	437	110	01/23/1989	
	A23	5,082,798	Arimoto	437	108	09/27/1990	
	A24	5,085,885	Foley et al.	477	38	09/10/1990	
	A25	5,091,320	Aspnes et al.	437	8	06/15/1990	
	A26	5,130,269	Kitahara et al.	437	111	04/25/1989	
Gre	A27	5,166,092	Mochizuki et al.	437	105	10/30/1990	
Foreign Patent Documents							
*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						YES	NO
	B6	01/29280 A1	WO	C23C	16/32		X
	B7	01/27347 A1	WO	C23C	16/44		X
	B8	01/27346 A1	WO	C23C	16/44		X
	B9	01/15220 A1	WO	H01L	21/768		X
OTHER ART							
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.						
C3	Yamaguchi, et al., "Atomic-layer chemical-vapor-deposition of silicon dioxide films with extremely low hydrogen content", <i>Appl. Surf. Sci.</i> , Vol. 130-132 (1998), pp. 202-207.						
C4	George, et al., "Surface Chemistry for Atomic Layer Growth", <i>J. Phys. Chem.</i> , Vol. 100 (1996), pp. 13121-13121.						
Examiner	A. Michelle Cowell			Date Considered		01-23-04	
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U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
me	A28	5,225,366	07/06/93	Yoder	437	108	06/22/1990
	A29	5,246,536	09/21/93	Nishizawa et al.	156	610	03/10/1989
	A30	5,250,148	10/05/93	Nishizawa et al.	156	611	11/12/1991
	A31	5,254,207	10/19/93	Nishizawa et al.	156	601	11/30/1992
	A32	5,256,244	10/26/93	Ackerman	156	613	02/10/1992
	A33	5,270,247	12/14/93	Sakuma et al.	437	133	07/08/1992
	A34	5,278,435	01/11/94	Van Hove et al.	257	184	06/08/1992
	A35	5,281,274	01/25/94	Yoder	118	697	02/04/1993
	A36	5,290,748	03/01/94	Knuuttila et al.	502	228	07/16/1992
	A37	5,294,286	03/15/94	Nishizawa et al.	156	610	01/12/1993
	A38	5,296,403	03/22/94	Nishizawa et al.	437	133	10/23/1992
	A39	5,300,186	04/05/94	Kitahara et al.	156	613	04/07/1992
me	A40	5,311,055	05/10/94	Goodman et al.	257	593	11/22/1991

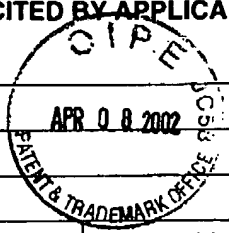
For Ign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B10	00/79576 A1	12/28/2000	WO	H01L	21/205		X
	B11	00/79019 A1	12/28/2000	WO	C23C	16/00		X
	B12	00/63957 A1	10/26/2000	WO	H01L	21/205		X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
C5	George, et al., "Atomic layer controlled deposition of SiO ₂ and Al ₂ O ₃ using ABAB...binary reaction sequence chemistry", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 460-467.
C6	Wise, et al., "Diethyldiethoxysilane as a new precursor for SiO ₂ growth on silicon", <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 334 (1994), pp. 37-43.

Examiner	<i>A. Michelle Howell</i>	Date Considered	01-23-04
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Examiner Unknown			



U.S. Patent Documents								
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate	
me		A41	5,316,615	05/31/94	Copel	117	95	03/09/1993
		A42	5,316,793	05/31/94	Wallace et al.	427	248.1	07/27/1992
		A43	5,330,610	07/19/94	Eres et al.	117	86	05/28/1993
		A44	5,336,324	08/09/94	Stall et al.	118	719	12/04/1991
		A45	5,338,389	08/16/94	Nishizawa et al.	117	89	04/21/1993
		A46	5,348,911	09/20/94	Jurgensen et al.	117	91	04/26/1993
		A47	5,374,570	12/20/94	Nasu et al.	437	40	08/19/1993
		A48	5,395,791	03/07/95	Cheng et al.	437	105	10/20/1993
		A49	5,438,952	08/08/1995	Otsuka	117	84	01/31/1994
		A50	5,439,876	08/08/95	Graf et al.	505	447	08/16/1993
		A51	5,441,703	08/15/95	Jurgensen	422	129	03/29/1994
		A52	5,443,033	08/22/95	Nishizawa et al.	117	86	03/11/1994
		A53	5,443,647	08/22/95	Aucoin et al.	118	723 ME	07/11/1994
me		A54	5,455,072	10/03/95	Bension et al.	427	255.7	11/18/1992

Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B13	00/54320 A1	09/14/2000	WO	H01L	21/44		X
	B14	00/16377 A2	03/23/2000	WO	H01L			X
	B15	00/15881 A2	03/23/2000	WO	C30B			X
	B16	00/15865 A1	03/23/2000	WO	C23C	16/00		X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
C7	Niinisto, et al., "Synthesis of oxide thin films and overlayers by atomic layer epitaxy for advanced applications", Mat. Sci. & Eng., Vol. B41 (1996), pp. 23-29.
Examiner	Date Considered
me	01-23-04
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PATENT & TRADEMARK OFFICE

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
aml	A55	5,458,084	10/17/95	Thorne et al.	117	89	12/09/1993
	A56	5,469,806	11/28/95	Mochizuki et al.	117	97	08/20/1993
	A57	5,480,818	01/02/96	Matsumoto et al.	437	40	02/09/1993
	A58	5,483,919	01/16/96	Yokoyama et al.	117	89	08/17/1994
	A59	5,484,664	01/16/96	Kitahara et al.	428	641	01/21/1994
	A60	5,503,875	04/02/96	Imai et al.	427	255.3	03/17/1994
	A61	5,521,126	05/28/96	Okamura et al.	437	235	06/22/1994
	A62	5,527,733	06/18/96	Nishizawa et al.	437	160	02/18/1994
	A63	5,532,511	07/02/96	Nishizawa et al.	257	627	03/23/1995
	A64	5,540,783	07/30/96	Eres et al.	118	725	05/26/1994
	A65	5,601,651	02/11/97	Watabe	118	715	12/14/1994
	A66	5,616,181	04/01/97	Yamamoto et al.	118	723 ER	11/21/1995
aml	A67	5,637,530	06/10/97	Gaines et al.	114	105	06/10/1996

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B17	99/41423 A2	08/19/1999	WO	C23C			X
	B18	99/29924 A1	06/17/1999	WO	C23C	16/04		X
	B19	99/01595	01/14/1999	WO	C30B	25/14		X
	B20	96/18756 A1	06/20/1996	WO	C23C	16/08		X

OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C8	Ritala, et al., "Perfectly conformal TiN and Al ₂ O ₃ films deposited by atomic-layer-deposition", <i>Chemical Vapor Deposition</i> , Vol. 5(1) (January 1999), pp. 7-9.
	C9	Klaus, et al., "Atomically controlled growth of tungsten and tungsten nitride using sequential surface reactions", <i>Appl. Surf. Sci.</i> , Vol 162-163 (2000), pp. 479-491.

Examiner As Mitchell Lowell Date Considered 01-23-04

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U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ame	A68	5,641,984	06/24/97	Aftergut et al.	257	433	08/19/1994
	A69	5,644,128	07/01/97	Wollnik et al.	250	251	08/25/1994
	A70	5,693,139	12/02/97	Nishizawa et al.	117	89	06/15/1993
	A71	5,705,224	01/06/98	Murota et al.	427	248.1	01/31/1995
	A72	5,707,880	01/13/98	Aftergut et al.	437	3	01/17/1997
	A73	5,711,811	01/27/98	Suntola et al.	118	711	11/28/1995
	A74	5,730,802	03/24/98	Ishizumi et al.	118	719	12/27/1996
	A75	5,747,113	05/05/98	Tsai	427	255.5	07/29/1996
	A76	5,749,974	05/12/98	Habuka et al.	118	725	07/13/1995
	A77	5,796,116	08/18/98	Nakata et al.	257	66	07/25/1995
	A78	5,807,792	09/15/98	Ilg et al.	438	758	12/18/1996
	A79	5,830,270	11/03/98	McKee et al.	117	106	08/05/1996
me	A80	5,835,677	11/10/98	Li et al.	392	401	10/03/1996


F reign Patent Documents							
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation
							YES NO
	B21	96/17107-A1	06/06/1996	WO	C23C	16/44	X
	B22	93/02111-A1	02/04/1993	WO	G08F	4/78	X
	B23	91/10510-A1	07/25/1991	WO	B01J	37/02	X
	B24	0-799-641-A2	10/08/1997	EP	B01J	20/32	X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
C10	Min, et al., "Atomic-layer-deposition of TiN thin films by sequential introduction of Ti precursor and NH/sub3", Symp.: Advanced Interconnects and Contact Materials and Processes for Future Integrated Circuits (Apr. 13-16, 1998), pp. 337-342.

Examiner	a. Mitchell Howell	Date Considered	01-23-04
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U.S. Patent Documents							
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are	A81	5,851,849	12/22/98	Comizzoli et al.	438	38	05/22/1997
	A82	5,855,675	01/05/99	Doering et al.	118	719	03/03/1997
	A83	5,855,680	01/05/99	Soininen et al.	118	719	11/28/1995
	A84	5,858,102	01/12/99	Tsai	118	719	02/14/1998
	A85	5,879,459	03/09/99	Gadgil et al.	118	715	08/29/1997
	A86	5,904,565	05/18/1999	Nguyen, et al.	438	687	07/17/1997
	A87	5,916,365	06/29/99	Sherman	117	92	08/16/1996
	A88	5,923,056	07/13/99	Lee et al.	257	192	03/12/1998
	A89	5,923,985	07/13/99	Aoki et al.	438	301	01/14/1997
	A90	5,925,574	07/20/99	Aoki et al.	437	31	04/10/1992
	A91	5,942,040	08/24/99	Kim et al.	118	726	08/27/1997
	A92	5,947,710	09/07/1999	Cooper, et al.	418	63	06/16/1997
are	A93	5,972,430	10/26/99	DiMeo, Jr. et al.	427	255.32	11/26/1997

F reign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B25	0-442-490-A1	08/21/1991	EP	C30B	25/02		X
	B26	0-344-352-A1	12/06/1989	EP	H01L	39/24		X
	B27	62-091495 A	04/25/1987	JP	C30B	25/02		X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
C11	Klaus, et al., "Atomic Layer Deposition of Tungsten using Sequential Surface Chemistry with a Sacrificial Stripping Reaction," Thin Solid Films 360 (2000), Pages 145 - 153, (Accepted Nov. 16, 1999).
C12	Min, et al., "Metal-Organic Atomic-Layer Deposition of Titanium-Silicon-Nitride Films", Applied Physics Letters, American Inst. Of Physics, Vol 75(11) (Sept. 13, 1999).
Examiner	A. Michelle Cowell
Date Considered	8-23-01
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U.S. Patent Documents								
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ave	A94	6,001,669	12/14/99	Gaines et al.	438	102	07/21/1992	
	A95	6,015,590	01/18/00	Suntola et al.	427	255.23	11/28/1995	
	A96	6,025,627	02/15/00	Forbes et al.	257	321	05/29/1998	
	A97	6,036,773	03/14/00	Wang et al.	117	97	03/27/1997	
	A98	6,042,652	03/28/00	Hyun et al.	118	719	09/07/1999	
	A99	6,043,177	03/28/00	Falconer et al.	502	4	01/21/1997	
	A100	6,124,158	09/26/00	Dautartas et al.	438	216	06/08/1999	
	A101	6,113,977	09/05/00	Soininen et al.	427	64	09/11/1997	
	A102	6,130,147	10/10/00	Major et al.	438	604	03/18/1997	
	A103	6,139,700	10/31/00	Kang et al.	204	192.17	09/30/1998	
	A104	6,174,377	01/16/2001	Doering, et al.	118	729	01/04/1999	
me	A105	6,174,809	01/16/2001	Kang, et al.	438	682	12/15/1998	
Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
	B28	60-065712-A	04/15/1985	JP	C01B	33/113		X
	B29	03-048421	03/01/1991	JP	H01L	21/302		X
	B30	03-286531	12/17/1991	JP	H01L	21/316		X
OTHER ART								
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.						
	C13	Martensson, et al., "Atomic Layer Epitaxy of Copper on Tantalum", <i>Chemical Vapor Deposition</i> , 3(1) (Feb. 1, 1997), pp. 45-50.						
	C14	Ritala, et al. "Atomic Layer Epitaxy Growth of TiN Thin Films", <i>J. Electrochem. Soc.</i> , 142(8) (Aug. 1995), pp. 2731-737.						
	C15	Elers, et al., "NbC15 as a precursor in atomic layer epitaxy", <i>Appl. Surf. Sci.</i> , Vol. 82/83 (1994), pp. 468-474.						
Examiner <i>A. M. G. Howell</i>					Date Considered <i>01-23-04</i>			
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U.S. Patent Documents							
*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
AME	A106	6,200,893	03/13/2001	Sneh	438	685	03/11/1998
	A107	6,203,613	03/20/2001	Gates, et al.	117	104	10/19/1999
	A108	6,207,302	03/27/2001	Sugiura, et al.	428	690	03/02/1998
	A109	6,248,605	06/19/2001	Harkonen, et al.	438	29	06/02/1999
	A110	6,270,572	08/07/2001	Kim, et al.	117	93	08/09/1999
	A111	6,287,965	09/11/2001	Kang, et al.	438	648	02/23/2000
	A112	6,291,876	09/18/2001	Stumborg, et al.	257	632	08/20/1998
	A113	6,305,314	10/23/2001	Sneh, et al.	118	723 R	12/17/1999
	A114	6,306,216	10/23/2001	Kim, et al.	118	725	07/12/2000
	A115	6,316,098	11/13/2001	Yitzchaik, et al.	428	339	03/23/1999
AME	A116	2001/0000866	05/10/2001	Sneh, et al.	118	723 R	11/29/2000
AME	A117	2001/0009140	07/26/2001	Bondestam, et al.	118	725	01/25/2001

F Foreign Patent Documents								
*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
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	B31	04-031396-A	02/03/1992	JP	C30B	25/14		X
	B32	06-291048	10/18/1994	JP	H01L	21/205		X
	B33	08-264530	10/11/1996	JP	H01L	21/3205		X
	B34	11-269652	10/05/1999	JP	C23C	16/44		X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
C16	Lee, "The Preparation of Titanium-Based Thin Film by CVD Using Titanium Chlorides as Precursors", <i>Chemical Vapor Deposition</i> , 5(2) (Mar. 1999), pp. 69-73.
C17	Martensson, et al., "Atomic Layer Epitaxy of Copper Growth & Selectivity in the Cu (II)-2,2,6,6-Tetramethyl-3, 5-Heptanedion ATE/H ₂ Process", <i>J. Electrochem. Soc.</i> , 145(8) (Aug. 1998), pp. 2926-2931.
Examiner	G. Michelle Howell
Date Considered 01-23-04	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. AMAT/5162		Serial No. 10/024,985	
LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Shang, et al.			
(Use several sheets if necessary)					Filing Date December 18, 2001		Group Unknown	
Examiner Unknown								

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PATENT & TRADEMARK OFFICE

U.S. Patent Documents							
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ame	A118	2001/0011526	08/09/2001	Doering, et al.	118	729	01/16/2001
ame	A119	2001/0031562	10/18/2001	Raaijmakers, et al.	438	770	02/22/2001
ame	A120	2001/0034123	10/25/2001	Jeon, et al.	438	643	04/06/2001
	A121						
	A122						
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	B36	198-20 147	07/01/1999	DE	H01L	21/3205	X
	B37	196-27 017	01/09/1997	DE	H01L	21/283	X
	B38	2 626 110	07/21/1989	FR	H01L	39/24	X
	B39	2 692 597	12/24/1993	FR	G23C	16/00	X
	B40	2 355 727A	05/02/2001	GB	C23C	16/44	X

OTHER ART	
*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
C18	Min, et al., "Chemical Vapor Deposition of Ti-Si-N Films with Alternating Source Supply," <i>Mat. Res. Soc. Symp. Proc.</i> , Vol. 564 (Apr. 5, 1999), pp. 207-210
C19	Bedair, "Atomic layer epitaxy deposition processes," <i>J. Vac. Sci. Technol.</i> 12(1) (Jan/Feb 1994)
C20	Yamaga, et al., "Atomic layer epitaxy of ZnS by a new gas supplying system in a low-pressure metalorganic vapor phase epitaxy," <i>J. of Crystal Growth</i> 117 (1992), pp. 152-155
C21	Elam, et al., "Nucleation and growth during tungsten atomic layer deposition on SiO ₂ surfaces," <i>Thin Solid Films</i> 386 (2001) Pages 41 - 52, (Accepted Dec. 14, 2000).
Examiner	Date Considered
A. Mitchell Howell	01-23-05

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U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
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SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant	Confirmation No.:
		Shang, et al.	Unknown
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		December 18, 2001	Unknown

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
ame	A1	4,813,846	03/21/89	Helms	414	744.1	04/29/87
	A2	4,917,556	04/17/90	Stark et al.	414	217	05/26/89
	A3	4,951,601	08/28/90	Maydan, et al.	118	719	06/23/89
	A4	5,000,113	03/19/91	Wang et al.	118	723	12/19/86
	A5	5,028,565	07/02/1991	Chang, et al.	437	192	08/25/1989
	A6	5,173,474	12/22/1992	Connell, et al.	505	1	03/11/1991
	A7	5,186,718	02/16/93	Tepman et al.	29	25.01	04/15/91
	A8	5,205,077	04/27/93	Wittstock	51	165 R	08/28/91
	A9	5,234,561	08/10/93	Randhawa et al.	204	192.38	08/25/88
	A10	5,259,881	11/09/93	Edwards, et al.	118	719	05/17/91
	A11	5,286,296	02/15/94	Sato et al.	118	719	01/09/92
	A12	5,580,380	12/03/1996	Liu, et al.	117	86	01/30/1995
	A13	5,609,689	03/11/97	Kato et al.	118	719	06/03/96
	A14	5,667,592	09/16/97	Boitnott et al.	118	719	04/16/96
	A15	5,674,786	10/07/97	Turner et al.	437	225	06/05/95
	A16	5,695,564	12/09/97	Imahashi	118	719	08/03/95
	A17	5,730,801	03/24/98	Tepman et al.	118	719	08/23/94
	A18	5,788,447	08/04/98	Yonemitsu et al.	414	217	08/05/96
	A19	5,788,799	08/04/98	Steger, et al.	156	345	06/11/96
	A20	5,801,634	09/01/98	Young et al.	340	635	09/08/97
	A21	5,856,219	01/05/99	Naito et al.	438	241	08/18/97
	A22	5,866,213	02/02/99	Foster et al.	427	573	07/19/97
	A23	5,866,795	02/02/99	Wang et al.	73	1.36	03/17/97
	A24	5,882,165	03/16/99	Maydan et al.	414	217	09/10/97
	A25	5,882,413	03/16/99	Beaulieu et al.	118	719	07/11/97
	A26	5,928,389	07/27/99	Jevtic	29	25.01	10/21/96

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Date Considered 01-02-04

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U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5162	10/024,985
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		Shang, et al.	Unknown
(Use several sheets if necessary)		Filing Date	Group
Examiner	Unknown	December 18, 2001	Unknown

U.S. Patent Documents

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Date Considered 01-22-04

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U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)					Docket No. APPM/5162		Serial No. 10/024,985	
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(Use several sheets if necessary)					Filing Date December 18, 2001		Group Unknown	
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Examiner <i>A. M. M. Corwell</i>					Date Considered <i>01-22-04</i>			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.								

U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
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		Shang, et al.	Unknown
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		December 18, 2001	Unknown

F r i g n Patent Documents

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G. M. Kelly, Lowell

Date Considered 01-22-04

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SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT				Applicant Shang, et al.		Confirmation No.: Unknown	
(Use several sheets if necessary)				Filing Date December 18, 2001		Group Unknown	
Examiner Unknown							

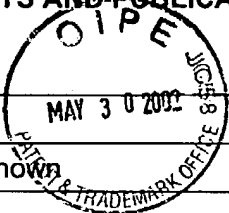
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PATENT & TRADEMARK OFFICE

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Examiner	<i>A. Michelle Howell</i>	Date Considered	01-22-04
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SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT					Applicant Shang, et al.		Confirmation No.: Unknown	
(Use several sheets if necessary)					Filing Date December 18, 2001		Group Unknown	
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Examiner <i>A. Mitchell Howard</i>	Date Considered 01-22-02
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U.S. Department of Commerce, Patent and Trademark Office		Docket No.	Serial No.
(PTO Form 1449 modified)		APPM/5162	10/024,985
SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant	Confirmation No.:
		Shang, et al.	Unknown
(Use several sheets if necessary)		Filing Date	Group
Examiner	Unknown	December 18, 2001	Unknown

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*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
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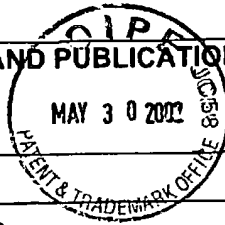
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SUPPLEMENTAL LIST OF PATENTS AND PUBLICATIONS CITED BY APPLICANT		Applicant Shang, et al.	Confirmation No.: Unknown
(Use several sheets if necessary)		Filing Date December 18, 2001	Group Unknown
Examiner Unknown			



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		Shang, et al.	Unknown
(Use several sheets if necessary)		Filing Date	Group
Examiner Unknown		December 18, 2001	Unknown
OTHER ART			
*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.	
ame	C1	Ohba, et al., "Thermal Decomposition of Methylhydrazine and Deposition Properties of CVD TiN Thin Films", Conference Proceedings, Advanced Metallization for ULSI Applications in 1993 (1994), pp. 143-149	
ame	C2	Scheper, et al., "Low-temperature deposition of titanium nitride films from dialkylhydrazine-based precursors", Materials Science in Semiconductor Processing 2 (1999), pp. 149-157	
ame	C3	Suzuki, et al., "A 0.2- μ m contact filing by 450°C-hydrazine-reduced TiN film with low resistivity", IEDM 92-979, pp. 11.8.1 - 11.8.3	
ame	C4	Suzuki, et al., "LPCVD-TiN Using Hydrazine and TiCl ₄ ", VMIC Conference (June 8-9, 1993), pp. 418-423	
ame	C5	IBM Tech. Disc. Bull. "Knowledge-Based Dynamic Scheduler in Distributed Computer Control, (June 1990), pp. 80-84	
ame	C6	IBM Tech. Disc. Bull. "Multiprocessor and Multitasking Architecture for Tool Control of the Advanced via Inspection Tools" (May 1992), pp. 190-191	
ame	C7	McGeachin, S., "Synthesis and properties of some β -diketiminates derived from acetylacetone, and their metal complexes", Canadian J. of Chemistry, Vol. 46 (1968), pp.1903-1912	
ame	C8	Solanki, et al., "Atomic Layer deposition of Copper Seed Layers", Electrochemical and Solid State Letters, 3(10) (2000), pp. 479-480	
ame	C9	NERAC.COM Retro Search: Atomic Layer Deposition of Copper, dated October 11, 2001	
ame	C10	NERAC.COM Retro Search: Atomic Layer Deposition / Epitaxy Aluminum Oxide Plasma, dated October 2, 2001	
ame	C11	NERAC Search abstract of "Atomic Layer deposition of Ta and Ti for Interconnect Diffusion Barriers", by Rossnagel, et al., J. Vac. Sci. & Tech., 18(4) (July 2000)	
	C12	Abstracts of articles re atomic layer deposition	
ame	C13	Abstracts of search results re atomic layer deposition, search dated January 24, 2002	
ame	C14	Abstracts of articles re atomic layer deposition and atomic layer nucleation	
ame	C15	Abstracts of articles re atomic layer deposition and semiconductors and copper	
Examiner <i>ame</i>		Date Considered 01-22-04	
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